IN THE CLAIMS

Please cancel Claims 14-33 and 35 without prejudice.

1. (Original) A method for the spatially resolved determination of magnetic particle distribution, especially for the determination of, especially, physical, chemical and/or biological properties or parameters and/or changes in, especially, physical, chemical and/or biological properties or parameters within the area of examination of an object of examination by determining the changes in spatial distribution, concentration and/or anisotropy of the magnetic particles in this area of examination or in portions thereof in dependence on the effect of, especially, physical, chemical and/or biological influencing variables on at least a partial area and/or the, especially, physical, chemical and/or biological conditions in at least a partial area of the area of examination by means of the following steps:

a) Introduction of magnetic particles in at least a portion of the area of examination in a condition that is irreversible or reversible, particularly periodically, modifiable or modified by, particularly, physical, chemical and/or biological influencing variables that affect the area of examination or by conditions at the area of examination,

b) Generation of a magnetic field with a spatial distribution of the magnetic field strength such that the area of examination consists of a first sub-area with lower magnetic field strength and a second sub-area with a higher magnetic field strength,

c) Change of the spatial location of both sub-areas in the area of examination so that the magnetization of the particles changes locally,

d) Acquisition of signals that depend on the magnetization in the area of examination influenced by this change, and

e) Evaluation of said signals to obtain information about the spatial distribution, concentration and/or permanent or temporary anisotropy of the magnetic particles in the area of examination.

2. (original) A method as claimed in claim 2, characterized in that said conditions or parameters and/or external influencing variables are detected in an area of examination where the distribution and/or anisotropy of the magnetic particles changes or is changed in at least one portion of the area of examination.

3. (previously presented) A method as claimed in claim 1, characterized in that the magnetic particles in the condition in

step a) generally have the same form, especially a round external form and/or such a form that the magnetic particles do not have a preferential direction from a magnetic aspect.

4. (previously presented) A method as claimed in claim 1, characterized in that the magnetic particles are enzymatically broken down or are metabolized.

5. (previously presented) A method as claimed in claim 1, characterized in that the area of examination is subject to sound so that magnetostriction occurs in at least a portion of the magnetic particles.

6. (previously presented) A method as claimed in claim 1, characterized in that the permanent or temporary change in anisotropy, especially the effective anisotropy, of the magnetic particle is detected.

7. (previously presented) A method as claimed in claim 1, characterized in that the changes in spatial distribution and/or the permanent or temporary anisotropy of the magnetic particles detected in the area of examination are correlated with a local concentration, temperature, sound level and/ or a local pH value

and/or the presence or absence of one or more enzymes.

8. (original) A method to improve resolution during the determination of the spatial distribution of magnetic particles in an area of examination with the following steps,

a) Generation of a magnetic field with a spatial distribution of the magnetic field strength such that the area of examination consists of a first sub-area with lower magnetic field strength and a second sub-area with a higher magnetic field strength,

b) Change of the spatial location of both sub-areas in the area of examination so that the magnetization of the particles changes locally,

c) Acquisition of signals that depend on the magnetization in the area of examination influenced by this change, and

d) Evaluation of the said signals to obtain information about the spatial distribution of the signals in the area of information, characterized in that a high frequency field is irradiated in the area of examination so that the temperature of the magnetic particle spin system is increased.

9. (original) A method as claimed in claim 8, characterized in that a high frequency field with a frequency in the range

between circa 100 kHz to circa 100 GHz is radiated.

10. (previously presented) A method as claimed in claim 1, characterized in that the magnetic particle is a mono-domain particle that can be reverse magnetized by Neel rotation and/or that the reverse magnetization is caused by Brownian rotation.

11. (previously presented) A method as claimed in claim 1, characterized in that the magnetic particle may be represented by a hard or soft magnetic multi-domain particle.

12. (previously presented) A method as claimed in claim 1, characterized in that the magnetic particles comprise hard magnetic materials.

13. (previously presented) A method as claimed in claim 1, characterized in that the hard magnetic materials comprise Al-Ni, Al-Ni-Co and Fe-Co-V alloys as well as barium ferrite (BaO $6xFe_2O_3$).

Claims 14-33 (cancelled)

34. (previously presented) Use of a magnetic particle composition having a magnetization curve having a step change,

the step change being characterized in that the magnetization change, as measured in an aqueous suspension, in a first field strength window of magnitude delta around the inflection point of said step change is at least a factor 3 higher than the magnetization change in the field strength windows of magnitude delta below and/or in the field strength windows of magnitude delta above the first field strength window, wherein delta is less than 2000 microtesla and wherein the time in which the magnetisation step change is completed in the first delta window is less than 0.01 seconds in a method according to claim 1.

35. (cancelled)

36. (previously presented) An arrangement for carrying out the method as claimed in claim 8, comprising

a) at least one device for generating a magnetic gradient field in at least one examination area of an examination object (A), said device comprising a means for generating a magnetic field with a spatial profile of the magnetic field strength such that there is produced in the examination area a first sub-area having a low magnetic field strength and a second sub-area having a higher magnetic field strength,

b) means to change the spatial location of both sub-areas in the area of examination so that the magnetization of the particles changes locally,

c) high frequency generating means to generate a high frequency field to irradiate the area of examination such that the temperature of the magnetic particle spin system is increased,

d) Means to acquire signals that depend on the magnetization in the area of examination influenced by this change,

e) Evaluation means for evaluating said signals to obtain information about the spatial distribution of the signals in the area of information.

37. (original) An arrangement according to claim 36, wherein the frequency generated by the high frequency generating means is between 100 kHz and 100 GHz, preferably 10 to 100 MHz.